

REMARKS

In view of the above amendments and the following remarks, reconsideration and further examination are respectfully requested.

I. Amendments to the Specification

The specification has been reviewed and revised to improve the English grammar. No new matter has been added.

II. Amendments to the Claims

Claims 3, 4 and 11 have been cancelled without prejudice or disclaimer of the subject matter contained therein.

Non-elected claims 13-16 and 18 have been withdrawn.

Further, independent claim 1 has been amended to clarify features of the invention recited therein and to further distinguish the present invention from the references relied upon in the rejections discussed below.

It is also noted that claims 1, 2, 5-10, 12 and 17 have been amended to make a number of editorial revisions thereto. These editorial revisions have been made to place the claims in better U.S. form. Further, these editorial revisions have not been made to narrow the scope of protection of the claims, or to address issues related to patentability, and therefore, these amendments should not be construed as limiting the scope of equivalents of the claimed features offered by the Doctrine of Equivalents.

III. 35 U.S.C. § 102 Rejections

Claims 1, 2, 4-6 and 8-12 were rejected under 35 U.S.C. § 102(b) as being anticipated by Koutny et al. (On-Line Detection of Proteins in Gel Electrophoresis by Ultraviolet Absorption and by Native Fluorescence Utilizing a Charge-Coupled device Imaging System). Further, claims 1, 2, 4-6 and 8-12 were also rejected under 35 U.S.C. § 102(e) as being anticipated by Hassard et al. (U.S. 6,613,210). Additionally, claims 1 and 7 were rejected under 35 U.S.C. § 102(b) as being anticipated by Schrifman (Analysis of Pharmaceuticals by Ultraviolet Densitometry on Thin-Layer Chromatograms I – Parabens in Gels and Creams). These rejections are believed clearly inapplicable to amended independent claim 1 and claims 2, 5-10, 12 and 17 that depend therefrom for the following reasons.

Amended independent claim 1 recites a device including, in part, a UV source for providing excitation light in a wavelength range from 140 to 320 nm, a separation medium for providing one of a flat-bed electrophoretic separation of electrically charged substances and a flat-bed chromatographic separation of electrically charged or neutral substances, regions of substances that are distributed in the separation medium, the substances distributed in the regions emitting, upon excitation by the excitation light provided from the UV source, a UV fluorescence radiation in a wavelength range from 150 to 400 nm, and a UV detector for detecting the UV fluorescence radiation, the UV detector being located on a same side of the separation medium as the UV source. Further, claim 1 recites that the excitation light provided from the UV source exhibits an energy density from 1 to 500 mW per cm², as measured at a surface of the separation medium. Koutny, Hassard and Schrifman, or any combination thereof fails to disclose or suggest the above-mentioned distinguishing features as recited in amended

independent claim 1.

Rather, Koutny teaches that a 30-W hand-held UV lamp emits a light having about 10 W in the line spectrum, about 5 % of which is at 254 nm, i.e. 500 mW, then the emitted light passes through a 10 nm band-pass interference filter with 13 % transmission, which leaves 65 mw, such that the energy density of the light at the gel is 0.011 mW/cm² (see page 184 under heading “Detection”). More specifically, Applicants note that the energy density of the light at the gel is 0.011 mW/cm², because the surface of band-pass interference filter is 2" X 2" (i.e., 25.8 cm²), causing the energy density of the light to be 2.5 mW/cm² at the filter, which, in turn, causes the energy density of the light at the gel, which is inversely proportional to the square of the distance (i.e. 2.5 mW/cm² /225), to equal 0.011 mW/cm².

The applicant earnestly believes that the calculation set forth above regarding the energy density of the light at the gel is correct, whereas the calculation of the density proposed in the Office Action (see page 10 of Office Action, which states that the energy density is 600 mJ/(s x cm²)) is erroneous.

Thus, in view of the above, it is clear that Koutny teaches that a 30-W hand-held UV lamp emits light that has a density of 0.011 mW/cm² at the surface of the gel, but fails to disclose or suggest that the excitation light provided from the UV source exhibits an energy density from 1 to 500 mW per cm², as measured at a surface of the separation medium, as recited in claim 1.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 1 and claims 2, 5-12 and 17 that depend therefrom are not anticipated by Koutny.

Now turning to Hassard, Applicants note that Hassard teaches a device for molecular

imaging of UV-absorbing molecules (e.g., nucleic acids and proteins), wherein the device measures a UV absorption of separable UV-absorbing molecules, and wherein the UV detector is situated on another side of the separation medium in relation to the UV source so that the UV detector can measure the fluorescent light transmitted through the separation medium containing the UV-absorbing molecules (see col. 7, line 50, to col. 8, line 40, and Fig. 6 showing a device where the UV lamp 722 is situated in the lid 720 over the electrophoretic gel 740 and where the UV detector lies in the base portion 710 under the electrophoretic gel 740).

Thus, in view of the above, it is apparent that Hassard requires that the UV detector is situated on another side of the separation medium in relation to the UV source so that the UV detector can measure the fluorescent light transmitted through the separation medium containing the UV-absorbing molecules, but fails to disclose or suggest a UV detector for detecting the UV fluorescence radiation, such that the UV detector is located on a same side of the separation medium as the UV source, as recited in claim 1.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 1 and claims 2, 5-12 and 17 that depend therefrom are not anticipated by Hassard.

Now turning to Schrifman, Applicants note that Schrifman teaches a method of using UV densitometry on different alkylparabens separated by thin layer chromatography, wherein the method involves measurement of the absorption of UV light by UV-absorbing alkylparabens (see page 1761, third last sentence of the item **General Procedure** “the total absorbance of each spot expressed as the total area under the density curve is measured ...”). Applicants submit that in view of the teaching of Schrifman, although no details are given in relation to the experimental

set up or device, it would be clear to a person skilled in the art of UV densitometry that the UV detector must be situated on the another side of the separation medium in relation to the UV source so that the UV detector can measure the UV light transmitted through the separation medium containing UV-absorbing substances.

Thus, in view of the above, it is clear that Schrifman requires that the UV detector to be situated on the another side of the separation medium in relation to the UV source so that the UV detector can measure the UV light transmitted through the separation medium containing UV-absorbing substances, but fails to disclose or suggest a UV detector for detecting the UV fluorescence radiation, the UV detector being located on a same side of the separation medium as the UV source, as recited in claim 1.

Therefore, because of the above-mentioned distinctions it is believed clear that independent claim 1 and claims 2, 5-12 and 17 that depend therefrom are not anticipated by Schrifman.

Furthermore, there is no disclosure or suggestion in Koutny, Hassard and/or Schrifman or elsewhere in the prior art of record that would have caused a person of ordinary skill in the art to modify Koutny, Hassard and/or Schrifman to obtain the invention of independent claim 1. Accordingly, it is respectfully submitted that independent claim 1 and claims 2, 5-12 and 17 that depend therefrom are clearly allowable over the prior art of record.

IV. 35 U.S.C. § 103(a) Rejections

Claims 1 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over various combinations of Hassard and Koutny. These rejections are believed clearly inapplicable

to amended independent claim 1 and claims 2, 5-10, 12 and 17 that depend therefrom for the following reasons.

As discussed above, Hassard and Koutny do not disclose or suggest the invention recited in claim 1. In view of the above, it is also submitted that the invention recited in claim 1 would not have been obvious or result from any combination of Hassard and Koutny. Furthermore, as a result, Hassard and Koutny also do not disclose or suggest the invention recited in claim 3, which depends from claim 1. Thus, at least, due to the dependence on claim 1, claim 3 would not have been obvious in view of any combination of Hassard and Koutny.

V. Conclusion

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance and an early notification thereof is earnestly requested. The Examiner is invited to contact the undersigned by telephone to resolve any remaining issues.

Respectfully submitted,

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